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Internet Addiction Levels of Middle School Students and Affecting Factors

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Abstract: The purpose of this descriptive study was to investigate the levels of internet addiction among middle school students and the contributing factors. The data required for the research were collected online between 16 December 2022-10 March 2023. The study group of the research consisted of middle school students. Online survey method, socio-demographic data collection form and Internet Addiction Scale (IAD) were used from 210 middle school students who voluntarily participated in the collection of research data and were selected by convenience sampling method, one of the improbable sampling methods, with written consent from their parents. SPSS 26.0 data analysis program was used in the statistical analysis of the data obtained in the study, and independent sample t-test and ANOVA analysis were used in the analysis of the data. 52.2% of the participating middle school students are boys and 47.8% are girls. It was determined that there was no significant difference in the scores of the sub-dimensions (deprivation, difficulty in control, impaired functioning and social isolation) of the internet addiction scale according to their gender, and there was a significant difference between the sub-dimensions according to age and grade levels, except for the control difficulty score, which is one of the sub-dimensions. It was determined that gender had no effect on internet addiction, however criteria such as age and social status did. It is proposed that middle school students receive training on

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the effective and healthy use of the internet, and that research be performed on the prevalence of internet addiction and its contributing causes.

Key words: Affecting Factors, Internet, Addiction, Middle School Students

Introduction

Healthy Internet use is defined as using the Internet for a specific purpose, within a reasonable amount of time, and without cognitive or behavioral disruption. Internet communication and in-person communication can be distinguished by healthy internet users (Davis, 2001). Yet, not everyone uses the Internet in a manner that is consistent with their needs and goals. Individuals encounter and are impacted by negativities in their life as a result of unhealthy internet use. Internet addiction is the most glaring of these negativities (Davis, 2001).

In 1995, Goldberg was the first to establish the concept of internet addiction. Young, though, was the beginning of scientific discourse. The concept of "Internet Addiction Disease" was first introduced by Young, among other academics. According to some academics, there is a connection between children's excessive Internet use and their psychological health as well as unfavorable outcomes at home and school (Young, 1996; Young, 1997; Morahan & Schumacher, 2000; Caplan, 2002).

There is very little space in the literature devoted to studies done to determine the views of families regarding their children's internet usage profiles. These studies were not conducted on a particular scale. The impact of internet use on children is only considered in general terms from the perspective of the parents. In his study entitled Parent's Views On Internet Use, Odabaş (2005) attempted to disclose the views of primary school children's families towards the Internet. Data for the study were gathered using a questionnaire that included 17 questions about the economic, social, educational, and security aspects of the Internet. 94 families were given the questionnaire. The results show that families believe the Internet improves academic attainment, is a necessity of modern living, and negatively impacts family connections. Attempting to determine excessive internet use, Cengizhan (2005)

determined, based on the findings that students described as a problem, that students' families and families were disconnected from excessive internet use. From a social standpoint, Yalcn (2003) attempted to explain the Internet. Esen (2007) analyzed internet addiction in terms of peer pressure and perceived social support variables. When children do not spend much time with their friends, it has been determined that they spend their time on the Internet (Gökçearslan, 2005). In addition to the studies on internet addiction and its prevalence, it has been determined through a review of the literature that the attitudes and opinions of families regarding the internet use habits of children are negative and that the academic success of internet addicts is low (Gökçearslan, 2005).

The purpose of this study was to determine the internet addiction levels of middle school students and the factors that contribute to these levels.

Research Questions

-What are the internet addiction levels of middle school students?
-Is there a relationship between middle school students' internet addiction levels and affecting factors?

Methods

Type of research

It was conducted as a descriptive study in order to determine the internet addiction levels of middle school students and their affecting factors.

Place and time of research

The research was collected by using the online questionnaire (Google Form) between 16 December 2022- 10 March 2023.

Population and sample of the research

The research population consisted of children in middle school age. However, since it is close to impossible to reach middle school students living in Turkey, the study was created online. Students who were in middle school and had access to the internet were included in

the study. Questionnaire was used as a data collection technique in the research, and the online questionnaire (Google Forms) was spread over social networks and social media, and many segments were tried to be reached. It was calculated based on the number of variables used in multivariate data analysis in determining the sample size in the study. In this context, the sample of the research was selected from the students living in the middle school period in Turkey with the convenience sampling method, which is one of the non-probability sampling methods. The research was carried out with 210 students who met the conditions of participation.

Inclusion / exclusion criteria for the study

Get involved

- Children who will participate in the research must be middle school age children.

- Children with parental consent

- Those who fill out the child consent form

Research exclusion criteria

- Children who are not at the age of middle school

- Children without parental consent

- Those who do not fill out the child consent form

Data collection tools

Research data will be collected with the following data collection forms: Socio-demographic data collection form for middle school children and Internet Addiction Scale (IAD).

Socio-Demographic Data Collection Form for Middle School Children

This form consists of a total of 3 questions about the age, gender and class status of the children.

Internet Addiction Scale (IAS)

This scale, consisting of 35 items and a five-point Likert type, was developed by Günç and Kayri (2010). The Cronbach's alpha (a) internal consistency coefficient for the items in the

scale was found to be 0.94, and this value indicates that the reliability of the test is high (Cömert & Ögel, 2009). The ratings on the scale were arranged as “Totally Agree”, “Agree”, “Undecided”, “Disagree”, “Strongly Disagree”. These answers are scored between 5 and 1. The answer “Totally Agree” corresponds to 5 points, while the answer “Strongly Disagree” corresponds to 1 point. Increasing scores from 1 to 5 indicate that the level of addiction is increasing. Four sub-factors are examined as "Deprivation", "Difficulty in Control", "Disruption in Functioning" and "Social Isolation".

Independet variable: Age, gender, grade status.

Dependent variable: Internet addiction levels and affecting factors.

Evaluation of data

SPSS (Statistical Package for Social Sciences) 26.0 package program was used in the analysis of the data. Independent sample t-test and ANOVA tests were used to evaluate the ınternet addiction levels and affecting factors of middle chool students.

Results

When Table 1 is examined, 52.2% of the participants are male and 47.8% are female. In their age distribution, 34.3% are 13 years old, 24.9% are 14 years old, 22.9% are 15 years old and 17.9% are 12 years old. In terms of education, 42.3% are 8th grade, 32.8% are 6th grade and 24.9% are 7th grade.

Table 1. Distribution of Demographic Characteristics of Middle School Students

Gender	Number (n)	Percentage (%)
Female	96	47,8
Male	105	52,2
Total	201	100
Age	Number (n)	Percentage (%)
12 y/o	36	17,9

13 y/o	69	34,3
14 y/o	50	24,9
15 y/o	46	22,9
Total	201	100

Educational status	Number (n)	Percentage (%)
6th grade	66	32,8
7th grade	50	24,9
8th grade	85	42,3
Total	201	100

When Table 2 is examined, the average score of the responses to deprivation, which is the sub-dimension of the internet addiction scale, varies between 33 and 50 points, with an average of 34.99±5.42 points. The mean score of responses to control difficulty ranges from 14 to 50 points, with an average of 29.50±7.99 points. The mean score of the responses to the impairment in functioning sub-dimension ranges from 7 to 35 points, with an average of 10.33±8.99 points. The mean score of the responses to social isolation ranges from 14 to 50 points, with an average of 9.72±6.15 points.

Table 2. Distribution of Sub-Dimensions Scores of the Internet Addiction Scale

	Lowest	Highest	Mean	SD
Deprivation	33	50	34,99	5,42
Difficulty in Control	14	50	29,50	7,99
Impairment in Functioning	7	35	10,33	8,99
Social Isolation	7	35	9,72	6,15

When Table 3 is examined, there is no significant difference in the sub-dimensions of the internet addiction scale of middle school students such as deprivation, control difficulties, impaired functionality and social isolation scores ($p>.05$).

Table 3. Comparison of Middle School Students' Internet Addiction Scale Sub-Dimension Scores by Gender

	Gender	N	Mean	SD	t	p
Deprivation	Female	96	35,76	6,17	1,929	,055
	Male	105	34,29	4,53		
Difficulty in Control	Female	96	30,56	8,90	1,808	,072
	Male	105	28,53	6,96		
Impairment in Functioning	Female	96	11,43	10,21	1,657	,099
	Male	105	9,33	7,62		
Social Isolation	Female	96	9,88	6,62	,361	,719
	Male	105	9,57	5,70		

When Table 4 is examined, there is a significant difference according to the age of middle school students in the scale of deprivation (F=7.168; p<.05), difficulty in control (F=10.070; p<.05), impaired functionality (F=6.973; p<.05) and social isolation (F=4.192; p<.05). According to the Tukey multiple comparison test, which was conducted to measure the level of significant difference, the deprivation, dysfunction and social isolation scores of middle school students aged 15 (respectively; $\bar{x}$=38.17, $\bar{x}$=15.52, $\bar{x}$=12.04) and 12 (respectively; $\bar{x}$=37.25, $\bar{x}$=14, $\bar{x}$=12.75) were higher than those aged 13 (respectively; $\bar{x}$=33.14, $\bar{x}$=7.33, $\bar{x}$=7.96) and 14 (respectively; $\bar{x}$=33, $\bar{x}$=7.06, $\bar{x}$=7.84) years. Middle school students aged 15 ($\bar{x}$=34.69) had higher control difficulty scores than those aged 12 ($\bar{x}$=29.22), 13 years ($\bar{x}$=27.27) and 14 years old ($\bar{x}$=28).

Table 4. Comparison of Middle School Students' Internet Addiction Scale Sub-Dimension Scores by Age

	Groups	N	Mean	SD	F	p	**Dif.**
Deprivation	12 y/o	36	37,25	7,46	14,867	,000**	15 y/o, 12 y/o >13 y/o, 14 y/o
	13 y/o	69	33,14	4,52			
	14 y/o	50	33	2,23			
	15 y/o	46	38,17	7,91			

Difficulty in Control	12 y/o	36	29,22	12,98	10,070	,000**	15 y/o >12 y/o, 13 y/o, 14 y/o
	13 y/o	69	27,27	2,61			
	14 y/o	50	28	1,23			
	15 y/o	46	34,69	10,23			
Impairment in Functioning	12 y/o	36	14	12,29	14,239	,000**	15 y/o, 12 y/o >13 y/o, 14 y/o
	13 y/o	69	7,33	2,24			
	14 y/o	50	7,06	1,42			
	15 y/o	46	15,52	13,03			
Social Isolation	12 y/o	36	12,75	7,90	9,673	,000**	15 y/o, 12 y/o >13 y/o, 14 y/o
	13 y/o	69	7,96	3,46			
	14 y/o	50	7,84	2,42			
	15 y/o	46	12,04	8,56			

When Table 5 is examined, there is a significant difference in the scale of deprivation (F=7.168; p<.05), impairment in functionality (F=6.973; p<.05) and social isolation (F=4.192; p<.05) according to the grades of middle school students. According to the Tukey multiple comparison test, which was conducted to measure the level of significant difference, the 8th (respectively; $\bar{x}$=36.12, $\bar{x}$=12) and 7th (respectively; $\bar{x}$=35.72, $\bar{x}$=11.84) grade middle school students' deprivation and dysfunction scores were higher than the 6th grades (respectively; $\bar{x}$=33, $\bar{x}$=7.04). The social isolation scores of the 7th grade ($\bar{x}$=10.84) middle school students are higher than the 6th grade ($\bar{x}$=7.97) students. However, there is no significant difference in control difficulty scores according to the grades of middle school students (p>.05).

Table 5. Comparison of Middle School Students' Internet Addiction Scale Sub-Dimension Scores by Class

Groups	N	Mean	SD	F	p	Dif.

Deprivation	6th grade	66	33	2,35	7,168	,001*	8th grade, 7th grade> 6th grade
	7th grade	50	35,72	6,29			
	8th grade	85	36,12	6,48			
Difficulty in Control	6th grade	66	28	5,45	2,810	,063	-
	7th grade	50	31,52	8,15			
	8th grade	85	29,48	10,45			
Impairment in Functioning	6th grade	66	7,04	1,37	6,973	,001*	8th grade, 7th grade> 6th grade
	7th grade	50	11,84	10,52			
	8th grade	85	12	10,72			
Social Isolation	6th grade	66	7,97	3,02	4,192	,016*	7th grade> 6th grade
	7th grade	50	10,84	7,33			
	8th grade	85	10,42	6,92			

Discussion and Conclusion

In middle school students' internet addiction levels and affecting factors, elements such as age, gender, and class status are crucial. 52.2% (105) of the participants are male and 47.8% (96) are female. 34.3% (69) are 13 years old, 24.9% (50) are 14 years old, 22.9% (46) are 15 years old and 17.9% (36) are 12 years old. In terms of education, it was determined that 42.3% (85) were 8th grade, 32.8% (66) were 6th grade and 24.9% (50) were 7th grade. The findings of the study on the distribution of demographic characteristics of middle school students are similar to the findings of the study on the prevalence of Internet addiction, prevalence and epidemiological characteristics in Mazandaran, Northern Iran by Kheirkhah et al. (2010) and the results of the study named Internet addiction potentially problematic Internet use in the 12-18 year old adolescent population by Kaltiala-Hein et al (2004). It was determined that there was no significant difference in the sub-dimensions of the internet addiction scale

(deprivation, difficulty in control, poor functionality and social isolation) of middle school students according to their gender. It was concluded that gender did not effect internet addiction levels. This finding is similar to the results of the Morahan-Martin J and Schumache(2000) study named The prevalence and relationships of pathological Internet use among university students, where the gender factor did not affect the internet use and addiction status of students, and the results of Morrison and Gore (2010) based on a questionnaire named The relationship between excessive Internet use and depression on 1,319 youth and adults. Internet use and time spent did not have an effect on the gender-related variable, according to a study by Park et al. (2008) that examined the prevalence of Internet addiction among South Korean teenagers and its relationships with family characteristics.

It was stated that there was a substantial difference in the scores of the Internet Addiction Scale sub-dimensions (deprivation, difficulty in control, reduced functionality, and social isolation) of middle school students based on their age. Our results demonstrate that internet addiction levels and age, which is one of the impacting elements, are also effective. In Yau et al(2012) .'s study titled "Is internet usage and video game playing addictive behaviors" biology, clinical and public health impacts for young people and adults, it is stated that internet use and time spent change according to age and are directly associated to age. Internet addiction danger factors among Internet users: In an online survey study done by Wu et al. (2015), it was concluded that as age grows, the length of Internet use increases and becomes more addicted. Similarly, it is stated in the results of Villella et al(2011) .'s study titled Behavioral addictions in adolescents and young adults: prevalence of a prevalence study that there is a substantial age-related variation in addiction in internet use.

It was concluded that there was a substantial variation in the sub-dimensions of the Internet Addiction Scale (deprivation, reduced functionality, and sociability) according to the classes of Internet Addiction middle School Students. Our research results indicate that the classroom environment has an effect on pupils' degrees of internet addiction. Chou and Hsiao's study (2000) "Internet addiction, use, happiness and enjoyment experience, status of Taiwanese university students" is in line with our findings in Duan et al(2017) .'s research on the change tendency of children left behind in rural China since the 21st century. Children's

internet use varies with their educational level and has an effect on their addiction, as stated in Gosling and Mason's (2015) internet research study in psychology. Yet, from our research results, it was determined that there was no difference in the control difficulty scores of the internet addiction scale sub-dimensions according to the class status of the middle school students. According to this result, it was determined that the internet addiction status of the associated sub-dimension did not differ according to the class status of the students.

This research was conducted with middle school students. Therefore, it was concluded that gender did not have an effect on internet addiction, but that factors such as age and class did. It is proposed that trainings be arranged on the more efficient and healthy use of the internet for students in middle school, and that research be conducted on the prevalence of internet addiction and the factors influencing it. It is believed that examining the internet addiction status results with samples from other educational levels, such as high school and university students, will be helpful in generalizing the addiction.

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Conflict of Interest Statement; There is no declaration of any conflict of interest.

Limitations: middle school students were included in the study. Research results can only be generalized to the sample group in the study.

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Ethical Aspect of Research/Ethical Approval Statement: The Internet Addiction Scale (IAS), which was validated and reliable in Turkish by Kayri and Gunuç (2009), and permission was obtained via e-mail. Permission was obtained from Hakkari University Scientific Research and Publication Ethics Committee (IRB:2022/107-1) for the research. Identity information was not obtained or shared in any way from the students. In order not to cause ethical violations within the scope of the research, informed consent form was obtained from the parents of the students.

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